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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DESHPANDE, KALYAN K	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,608	LUBASH ET AL.	
	Examiner	Art Unit	
	Kalyan K. Deshpande	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/27/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. The following is a non-final office action in response to the communications received on January 24, 2002. Claims 1-34 are now pending in this application.

Information Disclosure Statement

2. The examiner has reviewed the patents and articles supplied in the Information Disclosure Statements (IDS) provided on February 27, 2002.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 12-20, 26-28, 30, and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Costanza (U.S. Patent No. 5440480).

As per claim 1, Costanza teaches:

A complexity management system for managing a plurality of unique input variables and available resources to produce an optimized output, said complexity management system including:

a first portion which selectively generates a demand schedule (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where the system uses marketing and forecasting data to determine a demand schedule and generate a production schedule based on the demand data.);

a second portion which monitors said unique input variables and said available resources and which generates a signal to said first portion, based upon said monitoring of said input variables and available resources, effective to cause said demand schedule to be modified dynamically in a certain manner so as to optimize said output (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 2, Costanza teaches:

The complexity management system of claim 1 wherein said first portion comprises at least one computer (see column 3 lines 26-39 and figure 2; where the hardware and software of the invention involves a computer.).

As per claim 3, Costanza teaches:

The complexity management system of claim 2 wherein said second portion comprises at least one data acquisition assembly which is communicatively coupled to said first portion (see column 3 lines 52-67 and column 4 lines 12-22; where the system acquires data on customer orders and marketing forecast data and determines purchasing orders based on necessary raw materials.).

As per claim 4, Costanza teaches:

The complexity management system of claim 3 wherein said at least one data acquisition assembly acquires information on said available resources, said

information comprising a location and quantity of said available resources (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where the system calculates the total demand (quantity) per time period that can be produced and raw materials are acquired from vendors as necessary. Available resources here are materials necessary for production.).

As per claim 5, Costanza teaches:

The complexity management system of claim 2 wherein said first portion further comprises a notification assembly, said notification assembly being effective to communicate said modified demand schedule to said available resources (see column 6 lines 37-67 and figure 7; where the user of the system is notified if the smoothing procedure is successful. The modified demand schedule is available for the user to view as displayed in figure 7. Available resources here are production personnel.).

As per claim 6, Costanza teaches:

The complexity management system of claim 5 wherein said notification assembly further comprises a communications interface assembly which is effective to communicate said modified demand schedule to a supplier of said available resources (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 1-2, column 4 lines 33-39; where vendors are contacted for required raw materials.).

As per claim 11, Costanza teaches:

A method for managing a plurality of unique input variables and available resources to produce a desired output, comprising the steps of:

creating a demand schedule (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where the system uses marketing and forecasting data to determine a demand schedule and generate a production schedule based on the demand data.);

monitoring said input variables and available resources (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. The changing of forecast data and customer orders is monitored. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.); and

dynamically modifying said demand schedule in response to said monitoring of said input variables and available resources (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 12, Costanza teaches:

The method of claim 12 wherein said step of creating a demand schedule further comprises the steps of:

receiving desired orders (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where customer or marketing orders are received.) ;

grouping said desired orders in a certain priority (see column 3 lines 52-67 and column 4 lines 1-22; where the orders are grouped in to time periods based on the ability to satisfy the orders.); and

determining said demand scheduled based on said grouping (see column 4 lines 23-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 13, Costanza teaches:

The method of claim 11 wherein said step of dynamically modifying said demand schedule in response to said monitoring of said input variables and available resources further comprises the steps of:

comparing a desired quantity described in said desired orders to said determined quantity of said available resources (see column 4 lines 23-33; where the total demand is compared to the flex limit for any of the days in the time period. The flex limit is the adjustable production quantity available for the time period.);

re-grouping said desired orders in a second certain priority based on said comparison (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where the demand is moved to other time periods if they are beyond the flex fence and are moved to a time period that can absorb the excessive demand.); and

determining said modified demand schedule based on said re-grouping (see column 4 lines 23-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 14, Costanza teaches:

The method of claim 13 wherein said step of dynamically modifying said demand schedule in response to said monitoring of said available resources further comprises the steps of notifying at least one resource supplier of said modified demand schedule (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 1-2, column 4 lines 33-39; where vendors are contacted for required raw materials.).

As per claim 15, Costanza teaches:

A production optimization system for use with a production facility of the type which is adapted to create products by the use of certain materials and certain production assemblies, said production optimization system includes:

a first portion which selectively generates a production schedule (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where the system uses marketing and forecasting data to determine a demand schedule and generate a production schedule based on the demand data.);

a second portion which monitors said production assemblies and said materials and which generates a signal to said first portion, based upon said

monitoring of said production assemblies and said materials, effective to cause said production schedule to be modified in a certain manner (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 16, Costanza teaches:

The production optimization system of claim 15 wherein said first portion comprises at least one computer(see column 3 lines 26-39 and figure 2; where the hardware and software of the invention involves a computer.).

As per claim 17, Costanza teaches:

The production optimization system of claim 16 wherein said second portion comprises at least one data acquisition assembly which is communicatively coupled to said first portion (see column 3 lines 52-67 and column 4 lines 12-22; where the system acquires data on customer orders and marketing forecast data.).

As per claim 18, Costanza teaches:

The production optimization system of claim 17 wherein said at least one data acquisition assembly acquires information on said materials, said information comprising a location of said materials and a quantity of said materials (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where the system calculates the total demand (quantity) per time period that can be

produced and raw materials are acquired from vendors as necessary. Available resources here are materials necessary for production.).

As per claim 19, Costanza teaches:

The production optimization system of claim 16 wherein said first portion further comprises a notification assembly, said notification assembly being effective to communicate said modified production schedule to said certain production assemblies (see column 6 lines 37-67 and figure 7; where the user of the system is notified if the smoothing procedure is successful. The modified demand schedule is available for the user to view as displayed in figure 7. Available resources here are production personnel.).

As per claim 20, Costanza teaches:

The production optimization system of claim 19 wherein said notification assembly further comprises a communications interface assembly which is effective to communicate said modified production schedule to a vendor of said materials (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 1-2, column 4 lines 33-39; where vendors are contacted for required raw materials.).

As per claim 26, Costanza teaches:

A method for producing products by the use of various materials and assemblies, said method includes the steps of:

creating a production schedule(see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where the system uses marketing

and forecasting data to determine a demand schedule and generate a production schedule based on the demand data.);

monitoring said materials and said assemblies (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. The changing of forecast data and customer orders is monitored. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.); and

dynamically modifying said production schedule in response to said monitoring of said materials and said assemblies (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 27, Costanza teaches:

The method of claim 26 wherein said step of creating a production further comprises the steps of:

receiving customer orders (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where customer or marketing orders are received.);

grouping said customer orders in a certain priority (see column 3 lines 52-67 and column 4 lines 1-22; where the orders are grouped in to time periods based on the ability to satisfy the orders.); and

determining said production scheduled based on said grouping (see column 4 lines 23-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 28, Costanza teaches:

The method of claim 27 wherein said step of monitoring said materials and said assemblies further comprises the steps of:

determining a location of said materials (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where the system calculates the total demand (quantity) per time period that can be produced and raw materials are acquired from vendors as necessary. Available resources here are materials necessary for production.); and

determining a quantity of said materials (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where the system calculates the total demand (quantity) per time period that can be produced and raw materials are acquired from vendors as necessary. Available resources here are materials necessary for production.).

As per claim 30, Costanza teaches:

The method of claim 29 wherein said step of dynamically modifying said production schedule in response to said monitoring of said materials and said assemblies further comprises the steps of:

comparing a desired quantity described in said customer orders to said determined quantity of said materials (see column 4 lines 23-33; where the total demand is compared to the flex limit for any of the days in the time period. The flex limit is the adjustable production quantity available for the time period.);

re-grouping said customer orders in a second certain priority based on said comparison (see column 4 lines 33-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where the demand is moved to other time periods if they are beyond the flex fence and are moved to a time period that can absorb the excessive demand.); and

determining said modified production schedule based on said re-grouping (see column 4 lines 23-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 32, Costanza teaches:

The method of claim 31 wherein said step of dynamically modifying said production schedule in response to said monitoring of said materials and said assemblies further comprises the steps of notifying at least one material supplier of

said modified production schedule (see column 4 lines 23-67, column 5 lines 1-67, column 6 lines 1-67, and column 7 lines 1-26; where demand data is determined for fixed periods. If the total demand for any given time period exceeds production capabilities, the production schedule is modified to absorb the necessary extra production in to other time periods.).

As per claim 33, Costanza teaches:

The method of claim 26 wherein said step of monitoring said materials and said assemblies comprises:

monitoring said production schedule (see column 4 lines 23-67, column 5 lines 1-67, column 6 lines 1-67, column 7 lines 1-26, and figure 7; where the generated production schedule is monitored and modified based on forecasted demand or customer orders.);

receiving a quantity of a final product type from at least one manufacturing employee (see figure 7; where the quantity actually produced is listed); and

determining whether said quantity matches said production schedule (see figure 7; where the quantity calculated to be produced and the quantity actually produced are listed next to each other).

As per claim 34, Costanza teaches:

The method of claim 26 further comprising the step of selectively ordering at least one of said materials in response to said monitoring of said materials (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 1-2, column 4 lines 33-

39; where monitoring and modifying the production schedule leads to the ordering of raw materials from vendors based on production dates.).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7-10 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Costanza further in view of Kaneko et al. (U.S. Patent No. 5930763).

As per claim 7, Costanza teaches:

The complexity management system of claim 4, wherein the data acquisition assembly manages the required resources for production (see column 3 lines 52-67 and column 4 lines 12-22; where the system acquires data on customer orders and marketing forecast data and determines purchasing orders based on necessary raw materials.).

Costanza fails to teach:

wherein the data acquisition assembly further includes at least one sensor tag which is physically disposed on said available resources.

Kaneko teaches:

A sensor tag which is physically disposed on available resources (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items to identify the inventory.).

Costanza teaches a system and method to generate a production schedule based on total demand and the ordering the necessary raw materials that are not on-hand. Kaneko teaches a system and method for managing inventory. Kaneko teaches including a label that can be read, such as a bar code, for the purpose of identifying and cataloging inventory items. The advantages of labeling inventory items are that the labels would provide exact data regarding the quantity of an item on-hand and would provide a location of the on-hand inventory item. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to include the labels taught by Kaneko in to the Costanza system in order to keep track of on-hand inventory quantities and the location of inventory items.

As per claim 8, Costanza fails to teach:

at least one data acquisition assembly is operative to interrogate said at least one sensor tag for information.

Kaneko teaches:

at least one data acquisition assembly is operative to interrogate said at least one sensor tag for information (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items and a bar code reader that reads the labels.).

Claim 8 recites limitations already addressed by the rejection of claim 7; therefore the same rejection applies to this claim.

As per claim 9, Costanza fails to teach:

at least one data acquisition assembly comprises at least one radio transmitter/receiver assembly.

Kaneko teaches:

at least one data acquisition assembly comprises at least one radio transmitter/receiver assembly (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels and bar code readers are used to transmit inventory data to the system. The bar codes and bar code readers are a radio transmitter/receiver assembly.).

Claim 9 recites limitations already addressed by the rejection of claim 8; therefore the same rejection applies to this claim.

As per claim 10, Costanza fails to teach:

at least one data acquisition assembly further comprises at least one tag reader.

Kaneko teaches:

at least one data acquisition assembly further comprises at least one tag reader (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items and a bar code reader that reads the labels.).

Claim 10 recites limitations already addressed by the rejection of claim 9; therefore the same rejection applies to this claim.

As per claim 21, Costanza teaches:

A production optimization system for use with a production facility comprising a material inventory assembly, a material transport assembly, and a manufacturing assembly, said production optimization system comprising:

a computer system which is capable of receiving customer orders and which determines a production schedule based on said customer orders (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where customer or marketing orders are received.); and

a notification assembly which is communicatively coupled to said computer system, said material inventory assembly, said material transport assembly, and said manufacturing assembly (see column 6 lines 37-67 and figure 7; where the user of the system is notified if the smoothing procedure is successful. The modified demand schedule is available for the user to view as displayed in figure 7.).

Costanza fails to teach:

at least one sensor tag which is physically disposed on materials and components within said production facility;

at least one data acquisition assembly which interrogates said at least one sensor tag for information and which is communicatively coupled to said computer system.

Kaneko teaches:

at least one sensor tag which is physically disposed on materials and components within said production facility (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items to identify the inventory.); and

at least one data acquisition assembly which interrogates said at least one sensor tag for information and which is communicatively coupled to said computer system (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items and a bar code reader that reads the labels.).

Claim 21 recites limitations already addressed by the rejection of claims 7 and 8; therefore the same rejection applies to this claim.

As per claim 22, Costanza fails to teach:

at least one data acquisition assembly comprises at least one radio transmitter/receiver assembly.

Kaneko teaches:

at least one data acquisition assembly comprises at least one radio transmitter/receiver assembly (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels and bar code readers are used to transmit inventory data to the system. The bar codes and bar code readers are a radio transmitter/receiver assembly.).

Claim 22 recites limitations already addressed by the rejection of claim 9; therefore the same rejection applies to this claim.

As per claim 23, Costanza fails to teach:

at least one data acquisition assembly further comprises at least one tag reader.

Kaneko teaches:

at least one data acquisition assembly further comprises at least one tag reader (see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items and a bar code reader that reads the labels.).

Claim 23 recites limitations already addressed by the rejection of claim 10; therefore the same rejection applies to this claim.

As per claim 24, Costanza teaches:

notification assembly comprises at least one display which is disposed in said manufacturing assembly (see column 6 lines 37-67, column 7 lines 1-26, and figure 7; where an output screen is provided to display the modified production schedule.).

As per claim 25, Costanza fails to teach:

notification assembly creates at least one icon having a first colored portion and a second colored portion which abut on at least two but no more than three sides.

Kaneko teaches:

notification assembly creates data information regarding item information on labels packaged with inventory item see column 6 lines 5-31, column 7 lines 22-58, and figures 6 and 7A; where labels (sensor tags) are placed with inventory items and a bar code reader that reads the labels. The bar codes contain information regarding item information.).

Neither Costanza nor Kaneko explicitly teach creating two icons of different colors that abut on two sides. The purpose of using of icons of different colors that abut on two sides is to graphically provide material information (see Specification page 9). The advantage of graphically providing material information is that it efficiently provides material information to production employees. It is old and well-known in the art to graphically display material information to employees in order to facilitate knowledge of the material to an employee. Furthermore, Kaneko system uses labels to provide material information to employees. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to use two icons of different color that abut on two sides to graphically display material information to employees in order to facilitate the transfer of knowledge of a material to an employee.

Claim 25 further recites limitations already addressed by the rejection of claims 21 and 24; therefore the same rejection applies to this claim.

7. Claims 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Costanza (U.S. Patent No. 5440480).

As per claim 29, Costanza teaches:

The method of claim 28, wherein said step of monitoring said materials and said assemblies further comprises the step of determining production capability for a given time period (see column 3 lines 14-25, column 3 lines 52-67, column 4 lines 12-23, and figures 1 and 3; where the system uses marketing and forecasting data to determine a demand schedule and generate a production schedule based on the

demand data. The production schedule is based on time periods required for products.).

Costanza fails to teach:

step of monitoring said assemblies further comprises the step of determining the operational status of said assemblies.

It is old and well-known in the art to account for the availability of resources (operational status of assemblies) in determining a production schedule. The advantage of incorporating data on the availability of resources into the production schedule is that the data on the availability of resources gives a more accurate description of the production capability of the assembles. A more accurate description of the production capability leads to a more accurate production schedule. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to account for the availability of resources (operational status of assemblies) in determining a production schedule in order to more accurately develop or modify a production schedule.

As per claim 31, Costanza teaches:

The method of claim 30, wherein said step of dynamically modifying said production schedule in response to said monitoring of said materials and said assemblies further comprises the steps of:

Providing an output screen containing displaying the modified production schedule such that employees can see the modified production schedule (see

column 6 lines 37-67, column 7 lines 1-26, and figure 7; where an output screen is provided to display the modified production schedule.).

Constanza fails to teach:

notifying at least one assembly employee of said modified production schedule; and

notifying at least one material transport employee of said modified production schedule.

It is old and well-known in the art to notify production-related employees of changes to the production schedule. The advantage of notifying employees of changes in the production schedule and allowing the employees to see the changes in the production schedule is that it facilitates the coordination of all necessary production activities. Therefore, it would have been obvious, at the time of the invention, to notify an assembly employee and a material transport employee and to allow these employees to view the modified production schedule in order to facilitate the necessary production activities.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following are pertinent to the current invention, though not relied upon:

Koski et al. (U.S. Patent No. 5596502) teaches demand driven decisions support scheduling system.

Kauffman et al. (U.S. Patent No. 6842746) teaches an operations management system in an environment of resources.

Dietrich et al. (U.S. Patent No. 5630070) teaches a method for constrained material requirements planning, optimal resource allocation, and production planning provides for an optimization of a manufacturing process by designating the amounts of various manufactured products to be produced, which products include both end products as well as subassemblies to be employed in the manufacture of one or more of the end products.

Kennedy (U.S Patent No. 5845258) teaches strategy driven planning and scheduling system.

Bickley et al. (U.S. Patent No. 6816746) teaches a method and system provide for the control of resource allocation within a build-to-order manufacturing environment by monitoring a work-in-process (WIP) profile that represents dynamic attributes of an area in a manufacturing facility.

Tanaka et al. (U.S. Patent No. 5946663) teaches a method of planning a production schedule of the present invention has a production order preparing unit which, in response to an order, the completed product stock is allocated to the previous production schedule planned before an order change, and which prepares a production order.

Lilly et al. (U.S Patent No. 6088626) teaches a system for scheduling work orders in a manufacturing process.

Repath et al. (Repath, Kathleen; Foxlow, Tim; "KnowledgeBase Manufacturing", *Assembly Automation*, 1994, pp. 21-25) teaches a system and method for automating manufacturing assemble processes.

Repath (Repath, Kathleen; "Knowledge Base Manufacturing: the Leading Edge in Manufacturing Business Systems", *The Management Accounting Magazine*, May 1993, pp. 18) teaches manufacturing systems that advance all aspects of the manufacturing process including bill automation, order-taking, and production scheduling.

Li et al. (Li, Lode; Porteus, Evan L.; Zhang, Hongtao; "Optimal Operating Policies for Multiplant Stochastic Manufacturing Systems in a Changing Environment", *Management Science*, November 2001, pp. 1539-1551) teaches production scheduling and policies for multiple plants in multiple locations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan K. Deshpande whose telephone number is (571) 272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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